Comprehensive Tribal Natural Resource Management

A Report from the Treaty Indian Tribes in Western Washington • 2006

Member Tribes of the Northwest Indian Fisheries Commission

Cover: Kurt Grinnell, Jamestown S'Klallam tribal member, returns a salmon back to Jimmycomelately Creek as part of a ceremony celebrating the stream's restoration. Blessing the event is tribal member Pat Adams.

Photo: Debbie Preston, NWIFC
Map: Ron McFarlane, NWIFC

Introduction

Because of their treaty-reserved rights, their status as co-managers, and the connectivity of all natural resources, the tribes are an integral part of every aspect of natural resource management in western Washington. This report outlines some of those natural resource management activities during Fiscal Year 2005.

The scope of this report is indicative of the broad range of tribal natural resource management activities. Tribes are active participants in efforts ranging from wild salmon recovery to forest management, water quality and much more.

The 20 treaty Indian tribes in western Washington provide important scientific, cultural and historical perspectives to cooperative natural resource management processes. They are strategically located in each major watershed in the region and are able to quickly respond to the needs of those ecosystems, bringing thousands of years of knowledge and experience. Treaty tribes in western Washington include Lummi, Nooksack, Swinomish, Upper Skagit, Sauk-Suiattle, Stillaguamish, Tulalip, Muckleshoot, Puyallup, Nisqually, Squaxin Island, Skokomish, Suquamish, Port Gamble S'Klallam, Jamestown S'Klallam, Lower Elwha Klallam, Makah, Quileute, Hoh and Quinault.

The tribes know that the battle to save the natural resources of the region can only be won through cooperation. In a spirit of cooperative natural resource management that has prevailed in Washington since the 1980s, tribes partner with governments, agencies, organizations and others to effectively address the needs of the region's natural resources. Concurrently, this cooperative conservation approach has provided an economy of scale that enables efficient and effective use of limited funding.

The tribes have always depended on natural resources for cultural, spiritual and economic needs. There is no stronger ally than the treaty Indian tribes in the effort to effectively preserve, protect and restore those natural resources.

More information about the natural resource management activities of the treaty Indian tribes in western Washington is available from tribal Web sites. The Northwest Indian Fisheries Commission, a natural resource management support service organization for the tribes, maintains links to member tribes and additional information at www.nwifc.org.

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Introduction

Western Washington tribes are leaders in the salmon recovery effort.

Over the past three decades, in response to dwindling populations and a commitment to sustainable fisheries, the tribes and State of Washington have worked together as co-managers of the resource, modifying and reducing harvests to protect individual populations of salmon. Harvest levels have been cut dramatically – by as much as 80-90 percent in some cases – at great cost to the spiritual, cultural and economic well-being of the tribes. Harvest reductions alone, however, cannot make up for the loss of wild salmon production caused by lost and degraded spawning and rearing habitat.

Tribal governments have made strides to protect salmon habitat, both on their reservations through land-use and water resource authorities and off-reservation by collaborating with non-Indian neighbors to protect and restore watersheds that support salmon. Extensive habitat protection and restoration throughout the region is beyond the power of the tribes alone to implement. Only through concerted federal, state, tribal, local and private efforts can this be achieved.

Habitat degradation began more than a century ago, but over the past 30 years a huge population influx around the Puget Sound—with its accompanying development, pollution, and increased demand for water—is decimating much of what remains of the region's once highly productive salmon habitat. The population of the region is expected to double in the next 20 years, creating the urgent need to take meaningful steps to protect and restore ecosystems that support salmon and other life.

In the spring of 1999, the National Marine Fisheries Service listed three western Washington salmon stocks – Puget Sound chinook, Hood Canal/Eastern Strait of Juan de Fuca summer chum, and Lake Ozette sockeye – as "threatened" under the Endangered Species Act (ESA). The listing was the first of a species that resides in a heavily urbanized area such as Puget Sound, and placed massive ongoing responsibilities on the treaty tribes as co-managers of the salmon resource.

While the ESA is neither the starting point nor end point for salmon recovery, it is a primary consideration when contemplating actions potentially harmful to these listed species. Wild salmon are the key indicator species in the region, reflecting the overall health of the freshwater and nearshore marine ecosystems on which they depend, as well as the effectiveness of efforts to preserve, protect and enhance those ecosystems. Tribal salmon restoration efforts won't conclude until there are healthy wild fish populations to support harvest by both Indian and non-Indian fishermen.

The tribes know that cooperation is the key to wild salmon recovery, and are involved in myriad collaborative processes to reach that goal. Some of those processes include:

A Shared Strategy

The Shared Strategy is the essence of cooperative conservation. It is a bottom-up collaborative approach to wild salmon recovery that links ongoing wild salmon recovery initiatives at the tribal, state, federal and local levels to create a plan that is viable and cost-effective. The Shared Strategy establishes, organizes and manages these links; identifies necessary long- and short-term actions and coordinates funding needs; and proposes laws or policies needed to support wild salmon recovery.

After nearly six years of collaborative efforts, a recovery plan for listed Puget Sound chinook that meets ESA requirements has been delivered to the National Marine Fisheries Service (NMFS), the federal agency charged with implementing the ESA. The endorsement and participation of NMFS in the Shared Strategy process has been critical to its success.

The recovery plan's strength rests on three factors:

- Needs of people and fish are addressed together.

- The plan is built on the foundation of 14 watershed planning areas across Puget Sound; it contains a tailored approach to recovery based on local characteristics and conditions.
- While the plan focuses on chinook, it is designed with the entire ecosystem in mind, as well as the environmental and biological processes that create healthy places for salmon.

Hatchery Reform

Together, the more than 100 tribal, state and federal hatcheries in western Washington comprise the largest hatchery system in the world. They produce nearly three-fourths of all the salmon harvested in Puget Sound and are critical to meeting treaty tribal harvest obligations. Because of the need to protect weak wild salmon stocks, without hatcheries, there would be no salmon fishing at all in western Washington.

Congress in FY 00 adopted and funded the recommendations of a science advisory team to launch the Puget Sound and Coastal Washington Hatchery Reform Project, a systematic, science-driven examination of how hatcheries can help recover and conserve naturally spawning salmon populations and support sustainable fisheries.

Hatchery Reform means designing and operating hatchery programs in concert with the needs of wild salmon populations. Hatcheries are not a substitute for healthy spawning and rearing habitat, but rather an extension of that habitat – a productive tributary of the river on which a hatchery is situated. Together with ongoing habitat restoration efforts and strict harvest regulations, Hatchery Reform is a fundamental part of efforts to recover wild salmon and sustain fisheries in Washington.

The tribal, state and federal co-managers are now implementing more than 1,000 recommendations developed by an independent Hatchery Reform science panel as part of the Hatchery Reform Project to aid recovery of wild salmon through improved hatchery management practices.

A pair of coho salmon journey to the spawning grounds.

Pacific Coastal Salmon Recovery Fund

The Pacific Coastal Salmon Recovery Fund (PCSRF) was established by Congress in FY 00 to aid the conservation, restoration and sustainability of Pacific salmon and their habitats. Congressional appropriations have been made to Pacific Coast and Columbia River Indian tribes, as well as the states of Oregon, Washington, Idaho and Alaska to aid recovery of weak wild salmon stocks and leverage additional funding and volunteer participation by local and private entities.

PCSRF funding supplements extremely limited tribal resources for salmon recovery efforts. To make each federal funding dollar work to its fullest, tribes leverage PCSRF funding through partnerships with other tribes, local governments, watershed councils, conservation organizations and others.

PCSRF monies are making significant contributions to the recovery of wild salmon throughout the region. Since the program's inception, Pacific coastal tribes, including the 20 treaty Indian tribes in western Washington, have used PCSRF monies to address habitat restoration needs on more than 131 miles of streams, remove more than 38 fish passage barriers that have opened up about 12 miles of additional

salmon habitat, acquired more than 188 acres of land to protect salmon habitat, conducted more than 55 limiting factors assessments in salmon-bearing watersheds, and monitored more than 3,383 miles of salmon habitat.

Salmon And Steelhead Habitat Inventory And Assessment Project (SSHIAP)

Habitat is key to wild salmon recovery. The Salmon and Steelhead Habitat Inventory and Assessment Project (SSHIAP), a joint effort of the treaty tribes and State of Washington since 1995, is providing a blueprint for joint tribal/state action to define a cooperative process to implement habitat and restoration strategies by documenting and quantifying past and current habitat conditions; providing a consistent framework for data analysis; assessing the role of habitat loss and degradation on the condition of salmon and steelhead stocks; and assisting in the development of stock- or watershed-specific strategies for habitat protection and restoration.

In early 2005, SSHIAP produced the most comprehensive report to date on the status of salmon habitat in the region. "State of Our Watersheds" compiles decades of data collected by tribes, and state and federal agencies, painting a picture of watersheds across western Washington.

To track changes in salmon habitat, such as completed restoration projects, the Watersheds Report will be updated every year. While the report took years to compile and write, it represents decades worth of data collected by tribal staff across western Washington.

Timber/Fish/Wildlife Forests And Fish Report

In the 1970s, forest management in the State of Washington was a battlefield. Timber harvesting activities on state and private forestlands placed Indian tribes and conservation groups at odds with the timber industry over impacts to fish, wildlife, water quality and other aspects of the ecosystem. State government was unable to resolve the impasse. Each previous set of changes had touched off new legal battles. The timber industry claimed the proposed changes would spell disaster during a period of poor market conditions, while tribes and conservation groups argued the changes didn't go far enough.

The treaty Indian tribes in western Washington had seen how cooperation with the State of Washington in the early 1980s had led to improved management of the salmon resource, and proposed a similar approach to address forest practices.

With the aid of a mediator, the tribes, timber industry, environmental organizations, state government and others sat down to see if they could "agree to agree." The result was the historic Timber/Fish/Wildlife Agreement (TFW).

Listings of several western Washington salmon stocks under the Endangered Species Act (ESA), ongoing statewide water quality degradation, and concern over the continued economic viability of the timber industry brought TFW participants together again in November 1996 to develop joint solutions to those problems. The result was the Forests and Fish Report (FFR), an evolution of TFW that updated forest practices rules, obtained federal assurances for ESA considerations, and established research and monitoring programs. FFR was adopted by the Washington State Legislature in May 2000.

FFR is based on four goals:

- To provide compliance with the ESA for aquatic and riparian-dependent species on non-federal forest lands;
- To restore and maintain riparian habitat on non-federal forest lands to support a harvestable supply of fish;
- To meet the requirements of the federal Clean Water Act for water quality on non-federal forest lands; and
- To maintain the economic viability of the timber industry in the State of Washington.

The tribes continue to develop and implement a comprehensive work plan evaluating the forest management guidelines set forth in the FFR for adequacy in meeting tribal salmon recovery goals.

They have developed a comprehensive communication network and a coordinated tribal response to improve the application of FFR objectives in watersheds throughout the State of Washington. The tribes are working closely with federal agencies with respect to trust relationships and in providing technical support in response to ESA listings in the forested landscape.

Following is an example of one of the many types of wild salmon recovery efforts conducted annually by the treaty tribes in western Washington.

SRSC Project Aids Habitat For Fish, People

The Skagit River System Cooperative's (SRSC) first major restoration project in Island County will create acres of habitat for endangered fish species and improve the quality of life for homeowners surrounding the project area.

Staff from the Skagit River System Cooperative haul in a beach seine at Arrowhead Lagoon as part of a study on pocket estuary habitat.

"Through years of research, we have seen the important role estuaries play in recovering wild salmon," said Lorraine Loomis, fisheries manager for the Swinomish Tribe. "This project is one example of how we are following through on that research, doing what we need to do to bring back healthy salmon runs."

At Arrowhead Lagoon on the northern side of Camano Island, a blend of Puget Sound brine and fresh water from the Skagit and Stillaguamish rivers creates badly needed habitat for fish and shellfish. Included among the species the surrounding area sustains are the chinook salmon and bull trout, listed as "threatened" under the federal Endangered Species Act. SRSC, the natural resources arm of the Swinomish and Sauk-Suiattle tribes, is working with property owners on a plan to restore the lagoon's proper functions for fish.

"This type of habitat is fundamental for fish. Chinook salmon particularly use the lagoon for feeding, rearing, and refuge," said Darla Boyer, a restoration ecologist with SRSC who serves as the project manager. "Right now, about 80 percent of Arrowhead Lagoon is unavailable for fish. We're going to fix that."

The project will be the culmination of years of work. The SRSC research team has been gathering information by sampling fish in and around Arrowhead Lagoon since 2001.

Findings from this research indicate that wild juvenile chinook use pocket estuaries like Arrowhead Lagoon in migrating out to sea from the streams where they were born. This is a crucially important life stage for young salmon fry, and SRSC data shows that the growing fish prefer this type of habitat over nearby nearshore areas.

The tribes are working with property owners in the nearby Eagle Tree Estates complex, several of whom have already provided valuable information.

"We'll be working closely with homeowners throughout the process," said Boyer. "Our goal is to leave the area a better place to live for both fish and for human residents."

Introduction

Indian tribes have always lived on every major watershed in what is now the State of Washington. From time immemorial, tribal cultures, spirituality and economies have centered on fishing, hunting and gathering the natural resources of this region.

In the mid-1850s, when the United States sought to make land available for settlement in what is now the State of Washington, the tribes signed treaties through which they reserved that which was most important to them. Among those reserved rights was the right to harvest salmon in all of their usual and accustomed fishing places.

The promises of the treaties were broken in the years that followed. When tribal members tried to exercise their treaty-reserved rights, they were jailed and their catches confiscated. In 1974 the promises of the treaties were finally upheld when a federal district court reaffirmed the tribes' reserved rights in *U.S. vs. Washington,* also called the Boldt Decision. The ruling, subsequently upheld by the U.S. Supreme Court, established the tribes as co-managers of the salmon resource along with the State of Washington.

Tribal fisheries management programs have evolved to fulfill the tribes' roles as co-managers of the salmon resource. As court involvement in the planning process faded away, the tribal and state co-managers began to work cooperatively to develop joint salmon management plans.

Treaty tribes in western Washington operate programs addressing every aspect of natural resource management, from water quality, to forest management, shellfish, wildlife and more. Tribal salmon management has evolved as emerging fisheries have gained new importance and the challenge of managing salmon continues to grow.

A tribe's salmon management program typically includes a manager who oversees staff working in the areas of harvest management, enhancement and habitat. The fishery manager develops fishery plans and run size forecasts, assesses spawning escapement needs and monitors stock status, among other duties.

Each tribe or tribal natural resource management cooperative maintains enforcement programs to ensure that fishing regulations are observed. Enforcement officers work with state and federal enforcement personnel to protect the resource. Violations of tribal fishing laws are prosecuted in tribal courts.

Tribes also conduct fisherman identification and vessel registration programs. When a treaty fisherman sells his catch, his identification number is included on a fish receiving ticket that records the number, weight, species and location of harvest. The information is an important part of the Treaty Indian Catch Monitoring Program managed by the Northwest Indian Fisheries Commission. Catch data, which is critical to harvest management, is shared on a same-day basis with the Washington Department of Fish and Wildlife (WDFW).

Salmon Management Processes

From the moment of its birth, a Pacific Northwest salmon begins an epic journey through waters off the U.S. and Canadian coasts and through waters in the North Pacific before returning to the stream of its birth to spawn and die.

Fisheries in Puget Sound, the Strait of Juan de Fuca and nearshore coastal waters are co-managed by the treaty Indian tribes and WDFW.

As a sovereign government, each tribe regulates and coordinates its own fishery management program within its Usual and Accustomed fishing area. Tribal management jurisdiction includes six species of salmon, halibut, bottom fish, shellfish and other marine species. Tribes conduct fisheries off the Washington coast, in coastal rivers and bays, and throughout the inland waters of Puget Sound and its tributaries.

WDFW manages the state's share of the salmon resource, as well as other food fish and shellfish for commercial and sport user groups.

Pacific Fishery Management Council

Tribal and state managers work cooperatively through two overlapping processes, the Pacific Fishery Management Council (PFMC) and the North of Falcon process (NOF), to shape fishing seasons that protect the weakest salmon stocks. The PFMC is a public forum established by the federal government and is charged with creating a comprehensive fisheries plan, including the varied interests of tribal, state and federal managers, commercial and sport fishing groups and environmental groups.

While the PFMC is planning ocean fisheries, treaty tribes and states of Oregon and Washington in the NOF process are outlining their inshore and coastal fisheries. The North of Falcon process is so named because it deals with fisheries north of Cape Falcon, Oregon, to the U.S./Canada border. Through NOF, tribal and state biologists forecast expected salmon returns to specific areas. Population estimates are based on biological data collected during salmon migration, along with habitat information and weather conditions that also effect salmon populations. The number of fish available to harvest, determined through NOF, is what is left after escapement needs are met. Escapement is the number of fish needed to spawn and perpetuate a run at a desired level.

Pacific Salmon Treaty

Adult salmon returning to Washington migrate through both U.S. and Canadian waters and are harvested by fishermen from both countries. The 1985 Pacific Salmon Treaty, developed through cooperation by the tribes, state governments, U.S. and Canadian federal governments, and sport and commercial fishing groups, helps fulfill conservation goals and the right of each country to reap the benefit of its own fisheries enhancement efforts.

The treaty is implemented by the eight-member bilateral Pacific Salmon Commission (PSC), which includes representatives of federal, state and tribal governments. The PSC does not regulate salmon fisheries, but provides regulatory advice and recommendations, and a forum for the two countries to reach agreement on mutual fisheries issues. Three regional panels provide technical and regulatory advice to the PSC. In years when treaty agreements are not reached, the tribes have worked to ensure fisheries are still managed responsibly. Indian and non-Indian harvests are taken from a portion of the run surplus to escapement needs of the stock, or from a percentage of the overall run size.

In-Season Management

In-season management between treaty tribes and the state is an ongoing process during the fishing season. While the agreements during NOF outline the goals of the upcoming fisheries, in-season planning is the process of how those goals evolve into on-the-ground fisheries. By looking at fishing effort, weather conditions and several other factors that could not be foreseen in preseason meetings, the tribes and the state shift fisheries to best protect the salmon resource. Each tribe regularly issues "emergency regulations," in addition to their annual fishing regulations, that reflect these changes. Emergency regulations, usually issued about a week or two in advance, outline the days that can be fished and the reason for the fishery.

In addition to serving at the policy level on the PSC and its panels, tribal representatives also participate on the many committees and work groups providing technical support for the treaty's implementation. Tribes also conduct research as an integral part of the treaty's implementation.

Following are two examples of typical tribal salmon management efforts by the treaty tribes in western Washington.

Port Gamble S'Klallam Projects Eye Hatchery Coho

The Port Gamble S'Klallam Tribe is conducting two projects to better understand how hatchery coho salmon return to Port Gamble Bay and nearby Hood Canal streams.

"We want to really know what is truly happening with these hatchery coho populations: when they return, where they are going, and how they affect other salmon stocks," said Cindy Gray, finfish manager for the Port Gamble S'Klallam Tribe. The tribe rears a hatchery coho stock from the Quilcene National Fish Hatchery at the Port Gamble Bay Net Pens.

To find out exactly what those fish are doing, the tribe is combining information from a Port Gamble Bay test fishery with a new genetic study. Coupling information from the two projects will help the tribe determine the best way to manage hatchery coho salmon fisheries with minimal risks to wild salmon stocks.

The test fishery, which involves setting a gillnet in the same spot in Port Gamble Bay twice a week from July 31 through Oct. 6, gives the tribe an idea as to when hatchery coho move into the bay, when the run peaks, and what other species of salmon are mixed with the returning coho. This is the final year of the three-year test fishery project.

The new genetic study, which begins this fall and also will run for three years, builds on an existing effort of tribal crews surveying spawning grounds. Those crews will walk nearby streams and collect genetic samples from salmon carcasses, taking a tissue sample from each salmon's gill cover and also checking each carcass for an adipose fin and a coded wire tag. As juveniles, Port Gamble Bay hatchery coho salmon have their adipose fin removed and a coded wire tag inserted in their nose to distinguish them from wild coho. The tag contains information on when the fish was released and where the fish was reared.

The study is funded through the Pacific Coastal Salmon Recovery Fund.

Tim Seachord, hatchery manager for the Port Gamble S'Klallam Tribe, pulls in a salmon during a test fishery.

The genetic study will initially focus on eight northern Hood Canal streams: Martha John, Little Anderson, Seabeck, Stavis, Shine, Thorndyke, Tarboo, and Rocky Brook creeks. The tribe also will collect information on juvenile salmon on Little Anderson, Big Beef, Seabeck and Stavis creeks. The juvenile salmon study is in conjunction with U.S. Fish and Wildlife Service.

By studying salmon carcasses, the tribe can determine how hatchery and wild coho populations interact, and if that interaction is harming wild coho or any other salmon species such as summer chum. The Hood Canal summer chum population is listed as "threatened" under the federal Endangered Species Act.

"These projects will help us determine the best way to manage hatchery fish, and properly adjust our fisheries," Gray said.

Jimmycomelately Creek Project Completed

It took three years, dozens of partners and millions of dollars to undo what a century of progress did to Jimmycomelately Creek.

For more than 100 years, the creek that flows into Sequim Bay underwent serious alterations. Farmers straightened the stream for irrigation purposes; builders constructed dikes to protect developments; and loggers stripped away vegetation to make space for farmland.

But thanks to a completed restoration project, Jimmycomelately Creek and its estuary no longer show the scars of that previous mismanagement. The massive project, spearheaded by the Jamestown S'Klallam Tribe, transformed the landscape back into a healthy creek and estuary for fish and wildlife, while alleviating seasonal flood problems.

In July, the tribe, along with Gov. Christine Gregoire and other state, federal and local representatives, celebrated the restoration project during a ceremony near Jimmycomelately Creek in Blyn. Work on the project was spread out over three years, and included the digging of a new creek channel, the removal of several roads and structures, and the construction of a new bridge over Highway 101. The project's cost totaled $6 million, mostly funded with state and federal grants.

"The enormous size and scope of this project shows you just how important this creek, estuary and bay are to the tribe," said Ron Allen, chairman of the Jamestown S'Klallam Tribe. "We were determined to fix this poorly functioning waterway. And with the help of all the other governments, organizations, neighbors and volunteers that contributed to this project, we have done just that. Now the next step is to bring back the salmon."

Today, the annual chum salmon return to Jimmycomelately Creek is miniscule. The salmon returning to the stream – Hood Canal summer chum – are listed as "threatened" under the federal Endangered Species Act. The creek and estuary also are home to steelhead and cutthroat trout, along with coho salmon and several species of birds.

Jamestown S'Klallam Tribe natural resources technicians plant trees near Jimmycomelately Creek.

To help bring back a self-sustaining population of salmon, the tribe began the ambitious creek restoration project in 2002. The tribe and two state agencies purchased about 25 acres of land at the mouth of the creek. A new meandering channel, which followed the creek's course more than a century ago, was constructed. Two crumbling railroad bridges also were taken out, and a new bridge for Highway 101 was constructed over the creek.

Landfill and an old road to a former log yard site were removed, creating restored habitat for eelgrass, migratory birds and shellfish. Other roads and structures were removed and the newly created creek side and estuary were also re-planted with native trees and shrubs. The Washington Department of Fish and Wildlife and local volunteers implemented a broodstock recovery program to also help rebuild the chum salmon run.

"We really couldn't have accomplished this project without the help of all the groups involved, and most importantly the local landowners in the area," said Byron Rot, habitat biologist for the Jamestown S'Klallam Tribe.

Pacific Salmon Treaty

Introduction

Adult salmon returning to most western Washington streams migrate through both U.S. and Canadian waters, and are harvested by fishermen from both countries. For decades, there were no restrictions on the interception of returning salmon by fishermen of neighboring countries. Conservation goals and the right of each nation to reap the benefits of its own fisheries enhancement and restoration efforts were severely undermined as a result.

In 1985, after two decades of discussions, the Pacific Salmon Treaty (PST) was created through the cooperative efforts of the tribes, state governments, U.S. and Canadian governments, and sport and commercial fishing interests.

The Pacific Salmon Commission (PSC) was created by the United States and Canada to implement the treaty, which was updated in 1999. The PSC establishes fishery and allocation regimes, develops management recommendations and is the countries' forum to reach agreement on mutual fisheries issues. An eight-member bilateral body that includes representatives of tribal, state and federal governments governs the PSC. Four regional panels composed of fisheries managers and industry representatives advise the PSC on policy matters. Technical support for both the Commission and Panels come from four technical committees, which are species specific in focus.

As co-managers of the fishery resources in western Washington, tribal implementation of the PST is critical to achieve the shared goals of the PST in protecting, sharing and restoring salmon resources. In addition to serving at the policy level on the PSC and its panels, tribal representatives also participate on the many committees and work groups that provide technical support to implement the treaty.

Policy and Process

Successful implementation of the PST requires the tribes to develop, whenever possible, a unified position on issues addressed by the PSC. The treaty provides for tribal policy representation at all levels of the PSC structure. The western Washington tribes are fully engaged in PST implementation and process activities. Timely policy coordination between the tribes and the other U.S. PSC representatives is essential. This coordination and communication affords the U.S. Section and U.S. PSC representatives the flexibility necessary to be effective and efficient negotiators within the bilateral process.

Staff from the Northwest Indian Fisheries Commission, a support service organization of the treaty tribes, facilitate inter-tribal and inter-agency meetings, develop issue papers and analysis of strategies and negotiation options, and provide technical advice to the tribes and tribal PSC representatives. An extensive amount of time is devoted to ensure the tribes and their policy representatives are informed on the issues affected by the PST implementation process.

An adult sockeye salmon returns to spawn.

An NWIFC policy analyst serves as the "shadow" for PSC Commissioner Wm. "Ron" Allen, assisting him with policy issues pertaining to the PSC process. The policy analyst also prepares meeting announcements, briefing reports on key issues and other materials to keep concerned tribes informed.

Technical Implementation

NWIFC staff played key roles in the implementation of the Pacific Salmon Treaty in FY 05 through their involvement on several committees and working groups within the PSC structure. Staff held positions as U.S. chair of the Fraser Panel Technical Committee, and co-chair of the Joint Chum Technical Committee. Staff served on several other committees and working groups, including the Chinook Technical Committee, the Selective Fishery Evaluation Committee, the Coho Technical Committee, and the Working Groups on Mark-Recovery Statistics and Data Standards.

Research Projects And Data Gathering

Fisheries research is an integral part of treaty implementation. The treaty tribes have designated a substantial portion of their PST funding to conduct the necessary research, data collection, and fishery monitoring activities needed to manage salmon fisheries in the context of the PST.

Indicator Stock Tagging And Recovery Projects

Hatchery Indicator Stock Tagging and Recovery Program

This program is responsible for tagging the tribal hatchery salmon stocks that are part of the coast wide PST chinook and coho exploitation indicator stock program. The intent of the program is to ensure that each wild or hatchery production stock grouping has a representative hatchery stock that is being coded wire tagged (CWT). Subsequent tag recovery information allows the PSC chinook and coho technical committees to develop fishery statistics used to monitor and evaluate the impact of fisheries on wild stocks and evaluate rebuilding programs. More than 2 million fish (1,530,000 chinook and 640,000 coho) from 11 tribal hatcheries are annually tagged for the program. This includes six chinook stocks and eight coho stocks.

Wild Indicator Stock Studies

Four of the chinook tag groups are derived from wild brood-stocking efforts. Since wild chinook smolts are too sensitive to capture and tag, the intent is to mark a group that represents wild fish to the best extent possible. In these studies, wild adult chinook spawners are captured and brought into a hatchery for spawning. The subsequent progeny are incubated, reared, and coded wire tagged. After tagging, the fish are transferred to an imprinting pond adjacent the native river, where the fish are released at a size and time consistent with the wild chinook migration. Indicator stock programs include:

- Skagit River Summer Chinook Indicator Stock Study (Skagit System Cooperative)
- Stillaguamish River Native Chinook Indicator Stock Study (Stillaguamish Tribe)
- Hoko River Fall Chinook Indicator Stock Study (Makah Tribe)
- Queets River Wild Fall Chinook Indicator Stock Study (Quinault Indian Nation)

All of these projects include spawning surveys to estimate escapement and recover CWTs.

One wild coho indicator stock study is conducted by the Quinault Indian Nation. Queets River wild coho smolts are annually captured and tagged to provide an indicator stock of naturally produced coho salmon from the north Washington coast.

Tribal Projects

Stock Restoration Studies

Skagit River Chinook Restoration Project
(Skagit River System Cooperative:
Swinomish and Sauk-Suiattle Tribes)

Dungeness Chinook Evaluation And
Strait Of Juan de Fuca Fishery Analysis
(Jamestown S'Klallam Tribe)

Natural Production And Habitat Assessment Studies

Natural Production Of Coho Smolts
In The Queets River
(Quinault Indian Nation)

South Puget Sound Coho Production Investigation
(Squaxin Island Tribe)

Nooksack River Salmon Smolt Production Study
(Lummi And Nooksack Tribes)

Quillayute River Natural Coho Production Study
(Quileute Tribe)

Puyallup River Juvenile
Salmon Production Assessment
(Puyallup Tribe of Indians)

Development Of Hoh River
Fish Habitat Condition Strata
(Hoh Tribe)

Analysis of Stillaguamish
Estuary Use By Juvenile Chinook
(Stillaguamish Tribe)

Spawning Escapement Evaluation Studies

Nooksack River Chinook Escapement Study
(Nooksack Tribe)

East Kitsap Coho Escapement Study
(Suquamish Tribe)

Hatchery Chinook Straying
In The Nisqually Basin
(Nisqually Tribe)

Chinook Spawner Surveys In
Lake Washington/Green River Basins
(Muckleshoot Tribe)

Estimate Of Total Natural Coho Spawning
Escapement In Strait Of Juan de Fuca Streams
(Makah Tribe and Lower Elwha Klallam Tribe)

Fishery Monitoring Projects

Improvement Of Stillaguamish/Snohomish
Terminal Area Coho And Chum Salmon Management
(Tulalip Tribes)

Monitoring And Sampling Of
Hood Canal Commercial Coho Fisheries
(Skokomish Tribe)

Research, Management, And
Enhancement of Pacific Salmon Treaty Stocks
(Port Gamble S'Klallam Tribe)

Habitat Improvement Projects

Stillaguamish Culvert Analysis And Repair
(Stillaguamish Tribe)

Assessing Effectiveness Of Habitat Improvements

Using a smolt trap – a safe and effective device for catching and counting young fish – the Puyallup Tribe of Indians is assessing the success of recent habitat improvement on the Puyallup River.

Last summer the South Puget Sound Salmon Enhancement Group, in cooperation with the tribe, reconnected off-channel habitat with the mainstem Puyallup River. “That project was designed to give juvenile salmon additional habitat,” said Russ Ladley, resource protection manager for the Puyallup Tribe. “The smolt trap captures out-migrating juvenile salmon. Increased numbers of smolts can tell us if our habitat improvements are working.” The project is funded through the Pacific Salmon Treaty.

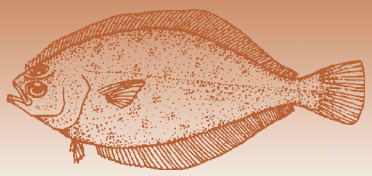
Recovering weak salmon populations is a primary focus of the Puyallup Tribe. Chinook salmon in the Puyallup and White Rivers are part of the Puget Sound population listed as “threatened” under the federal Endangered Species Act. “The more information we have on salmon populations, the better job we can do to focus our efforts on recovering weak runs,” said Ladley.

The trap, which the tribe has operated for five years, is checked twice a day by tribal staff. After counting and measuring each young salmon, they are released back into the river. Smolt comes from the word “smoltification;” the term to describe the physiological transformation that young salmon undergo in fresh water, just before migrating downstream and entering salt water.

In addition to assessing salmon recovery efforts across the watershed, the trap also helps the tribe plan salmon fishing seasons with their state co-managers. “The data from the trap gives us an early picture of what returns will be like in future years,” said Chris Phinney, harvest biologist for the Puyallup Tribe.

Andrew Berger and Kristin Williamson, Puyallup tribal biologists, check a smolt trap on the mainstem Puyallup River.

Groundfish Management



Introduction

Groundfish have always been important to the cultures of the treaty Indian tribes in western Washington. Today, harvest restrictions in place to protect weak wild salmon stocks – coupled with poor market conditions – have made groundfish species such as halibut, sablefish, Pacific cod and rockfish increasingly important to the treaty Indian tribes.

Unfortunately, just as coastal treaty tribes are beginning to fully access some of their treaty-reserved harvest of groundfish, several rockfish species have declined sharply. As a result, severe harvest restrictions have been implemented, threatening the cultural, spiritual and economic vitality of coastal treaty tribes.

Background

Treaty reserved fishing rights upheld by the courts in *U.S. vs. Washington*, established the tribes as co-managers of the groundfish resource. The tribes work closely with the State of Washington and U.S. government to develop and implement species conservation plans for all groundfish stocks in Puget Sound and along the Pacific coast.

Halibut are managed through the International Pacific Halibut Commission (IPHC), a bilateral management entity established in 1923 by the governments of the United States and Canada. The mandate of the organization is to study and preserve the stocks of Pacific halibut within the territorial waters of both nations.

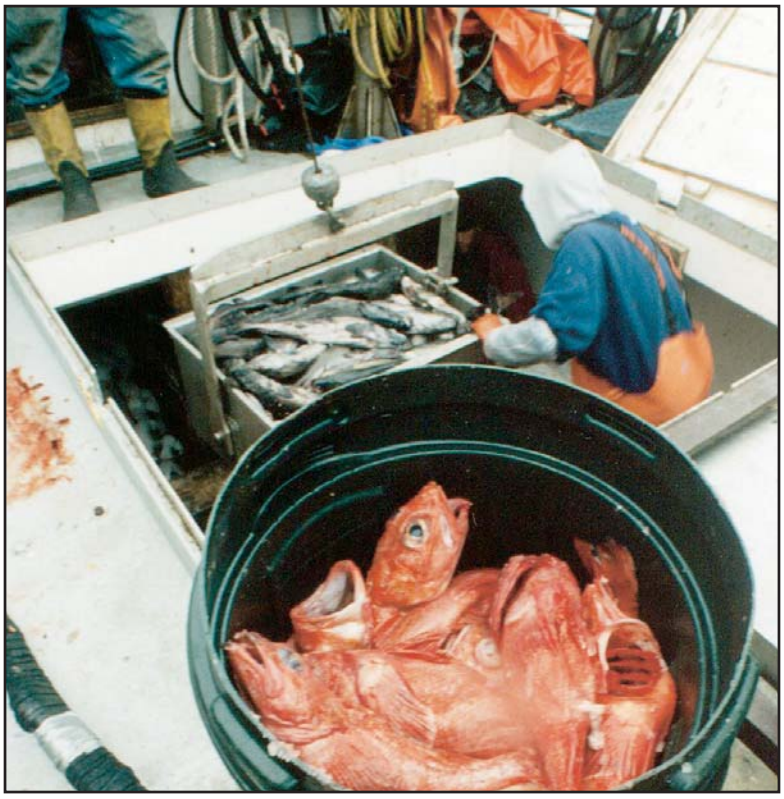
IPHC scientists assess the halibut stocks and the IPHC governing body develops a total allowable catch for stocks in various fishing areas along the Pacific coast from Alaska to northern California.

Fisheries for groundfish species such as sablefish, whiting and rockfish – in waters 3-200 miles off the West Coast – are managed through the Pacific Fishery Management Council (PFMC) under the U.S. Department of Commerce. The council includes representatives of the National Marine Fisheries Service (NMFS), the non-Indian commercial fishing industry, representatives of the non-Indian recreational fishing industry, the states of Washington, Oregon, Idaho and California, as well as a tribal representative.

NMFS scientists assess stocks annually. Various advisory committees analyze the assessments and develop catch recommendations that are passed on to the council, which develops quotas for Indian and non-Indian fisheries.

Status Of Groundfish Stocks In Western Washington

While some groundfish species are generally healthy, such as halibut, coastal Pacific cod and several species of flatfish, others are severely depressed,



A catch of rockfish is unloaded from a treaty tribal fishing boat on the Washington coast.

including a number of coastal rockfish species. In 2000, the National Marine Fisheries Service completed a status review of six Puget Sound groundfish stocks in response to a petition to list the stocks as "threatened" under the Endangered Species Act. The species included Pacific hake, Pacific cod, walleye pollock and three species of rockfish. None were found to be in need of protection under the ESA.

The agency examined a number of factors likely responsible for the species' decline, including harvest, habitat degradation, climate changes, and marine mammal predation. Although until the early 1980s there was a commercial Puget Sound hake fishery, the remaining species are typically targeted by sport fishermen.

A number of rockfish stocks along the Pacific Coast have been in sharp decline in recent years. In particular, depressed populations of yelloweye, bocaccio and canary rockfish have led to severe coastwide management restrictions for both commercial and recreational fisheries.

Tribal Groundfish Management

Tribal communities, with limited opportunities for economic diversification, already have been devastated over the past two decades by declining salmon populations and poor market conditions. The groundfish cutbacks come at a time when the coastal tribes are just beginning to fully access some of their treaty-reserved harvest of groundfish stocks. Tribal fishermen have invested heavily in the proper gear to fully participate in these fisheries, only to find their seasons curtailed.

Washington coastal treaty Indian tribes – Makah, Quileute, Hoh and the Quinault Indian Nation – are experiencing conservative quotas and conducting restrictive fisheries to ensure protection of weak groundfish stocks while allowing harvest of healthy groundfish populations.

The tribes are continuing to implement strict "trip limits" on their fishermen that limit the number of fish from depressed groundfish stocks that can be harvested incidentally during fisheries on healthy fish populations. For example, tribal fishermen targeting halibut, sablefish or whiting, are allowed only a small incidental harvest of a weak groundfish stock before being required to stop fishing in a particular area.

Tribes will continue to consider additional time and location restrictions to further minimize impacts on weak groundfish stocks. All of the potential impacts from the proposed tribal groundfish fisheries fall well within the guidelines being set by the PFMC.

As a manager of the groundfish resource with the federal and state governments, the tribes want to work together to address a significant lack of data on groundfish populations. When possible, biologists from coastal tribes and the Northwest Indian Fisheries Commission participate in the federal surveys that take place once every three years.

A goal of the co-managers is to have the survey occur every other year. One of the surveys is new and examines different areas than the old design. It is one step in the direction of obtaining better data for the different regions. The tribes would also like to see better surveys conducted in typical groundfish habitat, which is rocky. Many of the current surveys for groundfish occur in areas with smooth bottoms, which is not preferred groundfish habitat.

The existing data gaps result in the need for restrictive fisheries coastwide, regardless of regional differences in the health and abundance of some rockfish stocks.

Better data enables the tribes to make better management decisions. It also enables the tribes to tailor their management approach to take into consideration the differences that exist between groundfish populations from different areas along the coast.

Federal Government Groundfish Management

The PFMC manages the various groundfish species as a single, coastwide management unit with harvest levels set either as a single quota or as two regional quotas. This has led to disproportionate landing trends along the Pacific coast. Under this management approach, harvest is not directly related to the abundance of targeted species in a particular area. Consequently, harvest off the California coast can lead to increased harvest restrictions off Washington.

The design of resource assessment efforts also has hampered timely management response to severe population declines. The majority of stock assessment estimates are based on annual shelf/slope surveys, but species-specific rockfish management results in a vast number of stocks that need regular assessment updates. Constraints associated with a coastwide management unit approach, coupled with the large number of species involved, has resulted in only a portion of the stocks being assessed in a timely manner. The problem is exacerbated by the limited number of scientists available for stock assessments.

The assessments, combined with differences in life history characteristics of some species, has led to critical data gaps for some species. Some rockfish species such as yelloweye and canary, for example, cannot be fully assessed because their preferred habitat is rocky sea bottom, which is inaccessible to NMFS trawl survey gear.

Tribal, state, and federal fishery managers currently are discussing ways to restructure West Coast groundfish fisheries to address concerns over the status of yelloweye and canary rockfish. However, recent catch data from Washington fisheries indicate that the yelloweye rockfish decline off the outer coast is not as severe as the declines being observed in Oregon and California waters. The ability to shape a regional management response in concert with regional abundance is hampered by lack of data caused by the existing structuring of stock assessment surveys. As a result, the management responses under consideration for the tribes' usual and accustomed fishing areas off the Washington coast are actually being driven by stock status assessments from Oregon and California.

A transition to a more regional or ecosystem-based management approach is needed for groundfish. Management actions must be tailored to resource levels and related fisheries in particular areas. Regional management capability is required for effective resource management and more equitable distribution of impacts between fisheries. Tribal harvest of yelloweye rockfish has been minor, for example, but this fish is taken consistently in fisheries directed at other healthy groundfish species, such as halibut. As a result, the application of coastwide proportional reductions on yelloweye rockfish has a disproportional effect on tribal fisheries.

Tribal Program Needs

Currently, the four coastal Washington treaty tribes do not receive funds specifically for groundfish management activities. At the same time, the coastwide decline in groundfish stocks and resulting increased regulatory constraints are exponentially increasing the management burden on tribal fishery programs.

Although the tribes have begun to formulate some of the necessary management tools and assessment of groundfish resources, inadequate staffing and funding limits have prevented development of fully functional tribal groundfish programs. Full development of tribal groundfish programs will require additional funding to augment existing fishery management activities.

Tribal needs are divided into resource assessment and base program augmentation needs. Resource assessment needs address the management crisis resulting from the coastwide decline of groundfish, and yelloweye rockfish in particular. The objective is to develop coordinated regional management capability for groundfish resources located within the tribes' combined usual and accustomed fishing areas. Base program augmentation needs address requirements

for development of effective groundfish management programs.

Tribal resource assessment needs include:

- **Assessment** – The initial proposal is to assess stock structure and to conduct an abundance survey of the rocky, non-trawlable rockfish habitat between Leadbetter Point and Cape Flattery off the outer Washington coast. The objective is to develop an accurate assessment of rockfish populations off the Washington Coast from which future management decisions can be based.

- **Port Sampling** – A greater intensity of port sampling is required with the shift toward regional-specific and species-specific rockfish management. Tribal rockfish landings will require species differentiation and age composition sampling. This increased catch information is essential to adequately address the current decline in rockfish populations.

Tribal and Northwest Indian Fisheries Commission biologists participate in a groundfish population survey off the Washington coast.

- **Fishery Observers** - The transition to greater regional- and species-specific management increases the demand for fisheries specific information. Accurate fishery data regarding species catch rates by time, area, and gear type will be required. Such catch per unit effort information is essential for determining regional estimates for abundance, as well as harvest and bycatch rates.

Tribal base program augmentation needs include:

- **Management Program** – The establishment of a fully functional groundfish management program is necessary to ensure that the coastal tribes can effectively participate as resource managers in the federal PFMC groundfish management process. Additional qualified staff will assist the tribes to more fully participate in pre-season, in-season, and post-season groundfish management activities.

- **Enforcement** – The establishment of an adequate tribal enforcement program would complement the increased groundfish emphasis. Movement toward species-specific rockfish management increases the need for a greater level of intensity in enforcement activity. A greater enforcement presence will be required to monitor compliance with increased trip limits and landing restrictions.

- **Research** – Dedicated program funds are required to continue investigations of possible management responses to address changing resource conditions. Current pilot studies are exploring possible bycatch reduction methods. Base funding is required to fully assess and complete studies regarding the effects of depth, time, area, and bait type on reducing bycatch rates on species of concern. In addition, there is need for a detailed mapping of groundfish habitat within the tribal usual and accustomed fishing areas.

Shellfish Management

Introduction

Shellfish have been a mainstay of western Washington Indian tribes for thousands of years. Clams, crab, oysters, shrimp, and many other species were readily available for harvest year-round. Because large amounts could be harvested, cured, and stored for later consumption with relative ease, shellfish were an important source of nutrition for tribes.

Shellfish remain important for economic, subsistence, and ceremonial purposes. The rapid decline of many western Washington salmon stocks, due in large part to habitat loss from the region's burgeoning human population, has pushed shellfish to the forefront of many tribal economies.

The tribes have two distinct types of shellfish harvests – commercial and ceremonial/subsistence. Shellfish harvested during a commercial fishery are sold to licensed shellfish buyers who either sell shellfish directly to the public or to other commercial entities. Tribes collect taxes from tribal members who sell shellfish. Those taxes are used to help pay for tribal natural resource programs. Ceremonial and subsistence harvests of shellfish, which have a central role in tribal gatherings and daily nutrition, are intended for tribal use only.

Tribal Treaty Shellfish Rights

As with salmon, the right to harvest shellfish lies within a series of treaties signed with representatives of the federal government in the 1850s. Language pertaining to tribal shellfish harvesting is as follows:

"The right of taking fish at usual and accustomed grounds and stations is further secured to said Indians, in common with all citizens of the United States; and of erecting temporary houses for the purposes of curing; together with the privilege of hunting and gathering roots and berries on open and unclaimed lands. Provided, however, that they shall not take shell-fish from any beds staked or cultivated by citizens."

– Treaty of Point No Point
Jan. 26, 1855

A Skokomish tribal shellfish harvester picks oysters on a beach along Hood Canal.

In exchange for the peaceful relinquishment of what is today most of western Washington, the tribes reserved the right to continue to harvest fish and shellfish from all of their usual and accustomed harvest areas. The tribes were specifically excluded from harvesting shellfish from areas "staked or cultivated" by non-Indian citizens.

Clamming was dominated by the tribes well into the1920s, but as tideland continued to be purchased by non-Indians, tribes were slowly excluded from their traditional shellfish harvest areas. Tribal legal efforts to uphold the federal government's treaty promises began in the early 1900s. The U.S. Supreme Court ruled in *U.S. vs. Winans* that when a treaty reserves the right to fish at all usual and accustomed places, the state may not preclude access to those places.

In 1974, U.S. District Court Judge George Boldt ruled the tribes had reserved the right to harvest half of the harvestable salmon and steelhead in western Washington. Through the "Boldt Decision," upheld by the U.S. Supreme Court in 1979, tribal and state fisheries staff have worked together to develop fisheries regimes to ensure harvest opportunities for Indians and non-Indians alike. This new atmosphere of cooperative natural resources management gave the tribes hope that their treaty-reserved rights to shellfish harvest and management could be restored. Talks between the tribes and the state began in the mid-1980s, but were unsuccessful. In 1989, the tribes were forced to file suit in federal court to have their treaty shellfish harvest rights recognized. Years of negotiations were unsuccessful, and the issue went to trial in May 1994.

The Rafeedie Decision & Implementation Plan

After hearing testimony from tribal elders, biologists, historians, treaty experts, as well as testimony from private property owners and non-Indian commercial shellfish growers, Federal District Court Judge Edward Rafeedie followed in the footsteps of the Boldt Decision. He ruled the treaties' "in common" language meant that the tribes had reserved harvest rights to half of all shellfish from all of the usual and accustomed places, except those places "staked or cultivated" by citizens – or those that were specifically set aside for non-Indian shellfish cultivation purposes. "A treaty is not a grant of rights to the Indians, but a grant of rights from them," Rafeedie wrote in his December, 1994 decision, adding that the United States government made a solemn promise to the tribes in the treaties that they would have a permanent right to fish as they had always done. Rafeedie ruled all public and private tidelands within the case area are subject to treaty harvest, except for shellfish contained in artificially created beds. His decision requires tribes planning to harvest shellfish from private beaches to follow many time, place, and manner restrictions on harvest.

Since the U.S. Supreme Court's final refusal in 1999 to hear the case, several parties, including the tribes and shellfish growers, have been working on an implementation plan under the guidance of Seattle Federal Court Judge Robert Lasnik. Under the implementation plan, each party would have a clear and working understanding of the Rafeedie Decision and how it affects their everyday operations. The tribes have moved past litigation and into cooperative co-management of their treaty-reserved resources with the State of Washington. Tribal shellfish managers have developed harvest management and supplementation plans, and harvest data is collected and shared with other tribes and the state. Examples of cooperation can be found throughout the Puget Sound and coastal region.

FY 05 Tribal Shellfish Management Activities

Preliminary data for 2004, the most recent available, indicate that treaty tribes in western Washington harvested approximately 794,500 pounds of manila and native littleneck clams; 4.4 million pounds of geoduck clams; 278,000 pounds of oysters; 14.4 million pounds of crab; and 342,000 pounds of shrimp. These fisheries occur throughout Washington coastal areas and Puget Sound.

The tribes and state have entered into 27 different regional management plans for a variety of shellfish species. Each species has unique management requirements to ensure biologically sound harvests occur. Following are several examples of treaty tribal shellfish management activities during FY 05:

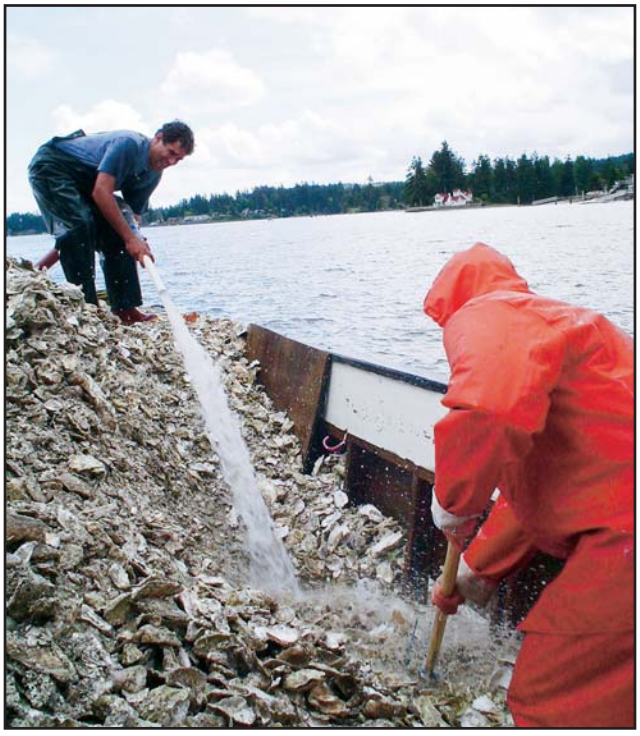
Suquamish Tribe Works To Restore Rare Oyster

Standing next to a mound of oyster shells on the bow of the Suquamish Tribe's barge, Paul Williams arms himself with a fire hose and gives his shipmate the go-ahead.

"Alright, turn it on!" yells Williams. A generator roars to life and out sprays a stream of water from the hose. Williams, the shellfish program manager for the Suquamish Tribe, aims the powerful stream at the hill of shells and blows them into the waters of Liberty Bay near Poulsbo. If all goes according to plan, those shells will soon be covered with maturing Olympia oysters, the highly savored and nearly extinct oyster of Puget Sound.

"We chose a site in the bay where a small population of Olympia oysters still exists, and it is our hope that their offspring will attach themselves to this layer of shells and begin to repopulate the area," Williams said.

About 5,000 square feet of state-owned tidelands was covered with 100 cubic yards – or about 10 dump truck loads – of Pacific oyster shell. It took the tribe, The Hood Canal Oyster Company and the Puget Sound Restoration Fund, the project's coordinator, two days to unload all the shell in the bay. The state Department of Fish and Wildlife also helped with the project.



Paul Williams, shellfish program manager for the Suquamish Tribe, blasts oyster shells into Liberty Bay.

The Olympia oyster, the only native oyster to western Washington, is small compared to the Pacific oyster. An average Olympia oyster is only 2-inches wide and two-inches long, whereas a Pacific is about double that size. What it lacks in size, however, it makes up in taste; the Olympia oyster is considered a delicacy throughout the world.

Consumer demand for the Olympia oyster, along with water pollution and over-harvest, has taken a toll on the shellfish. In the mid-1800s, a voracious appetite throughout the West for the shellfish was so great that the population was nearly harvested to extinction.

Demand was only part of the problem, however. Industries, such as pulp and paper mills, spilled chemicals into nearby waterways, polluting Olympia oyster beds and decimating the resource.

"I'm optimistic that with more restoration projects we can bring back an Olympia oyster population that can support tribal and non-tribal harvests in the future," Williams said. "This is a treasured resource that needs our help and deserves our attention."

Quinault Nation Donates Clams For Sport Harvest

An estimated 12,000 non-tribal recreational razor clam harvesters were on Copalis Beach north of Ocean Shores in early May thanks to a gift of 180,000 clams from the Quinault Indian Nation. "The Ocean Shores community and surrounding area were very appreciative," said Ed Johnstone, fisheries policy spokesperson for Quinault Indian Nation (QIN). "For centuries, we've always protected and shared this resource."

Recreational shellfish harvesters flood Copalis Beach on the Washington coast to harvest 180,000 razor clams donated by the Quinault Indian Nation.

Because tribal estimates found that surplus clams would exist this year, the nation offered to allow recreational diggers access to some of their share. "We were only able to include Copalis Beach in the two-day May opening because the Quinault Indian Nation generously agreed to transfer 180,000 clams from their share of the harvest to the non-tribal share," said Dan Ayres, coastal shellfish manager for the Washington Department of Fish and Wildlife. The QIN and the state work together to assess the clam populations on off-reservation beaches and develop harvest limits based on the available percentage of clams.

A weekend of non-tribal recreational clamming is big business for hotels, gas stations and restaurants in the Ocean Shores area. Business doubles at Anthony's Home Port Restaurant in Ocean Shores during a razor clam opening with nice weather, managers said. The numbers of cars entering Ocean Shores was up an average of 9 percent over this time last year mostly thanks to better weather and clam openers. More than 368,000 visitors passed through Ocean Shores in May according to Ken Mercer, director of tourism and business development for Ocean Shores.

Timber/Fish/Wildlife
Forests And Fish Report

Introduction

A national success story with an 18-year legacy of cooperative conservation began with the TFW Agreement of 1987 that was founded under President Ronald Reagan and has evolved during the past several administrations. TFW and FFR's strategy to address endangered species is one of the most comprehensive and successful national examples of cooperative conservation in forest resource management. As sovereign governments, the tribes believe that it is more efficient and effective to work in a collaborative and cooperative management process with their counterparts to implement their treaty-reserved management rights. The TFW cooperative strategy brings together tribes, state and federal agencies, environmental groups, and private forest landowners and has been successful at minimizing legal and legislative battles.

A variety of factors – including the listings of several western Washington salmon stocks under the Endangered Species Act (ESA), ongoing statewide water quality degradation, and concern over the continued economic viability of the timber industry – brought TFW participants together in November 1996 to develop joint solutions to these problems. Federal and local governments participated with original TFW members in what is commonly referred to as the TFW "Forestry Module Negotiations," a significant component of Washington's statewide salmon recovery effort. The result was a plan to update forest practices rules called the Forests and Fish Report (FFR), which was completed in April of 1999, and later adopted by the Washington State Legislature.

The FFR is based on four goals:

- To provide compliance with the ESA for aquatic and riparian-dependent species on non-federal forest lands;
- To restore and maintain riparian habitat on non-federal forest lands to support a harvestable supply of fish;
- To meet the requirements of the federal Clean Water Act for water quality on non-federal forest lands; and
- To maintain the economic viability of the timber industry in the State of Washington.

The six caucuses participating in FFR implementation are tribal, state and federal and local governments, the timber industry and conservation groups.

Tribal Participation In TFW/FFR Implementation

Adaptive management rules are the keystone to both the TFW and FFR strategies. Adaptive management provides a predictable and consistent process for advancing science and information to assist the state Forest Practices Board in developing forest practices rules and achieving aquatic and forest resource goals. These rules were approved by the Forest Practices Board in 2001 to ensure that the cooperative conservation strategy is grounded in law.

While there is not consensus among tribes on the entire Forests and Fish Report, there is consensus that the Adaptive Management Program component is critical to its success. Adaptive management is the process of evaluation and monitoring to constantly gauge the effectiveness of management practices and determine if changes are needed. This ranges from the use of Interdisciplinary Teams to properly implement the intent of the forest practices rules in complex site-specific situations, to conducting long-term effectiveness monitoring to establish whether the rules are meeting resource objectives.

Tribal participation is a critical component of TFW and FFR implementation. The federal stakeholders continue to rely heavily on tribal technical information to gauge its success. The tribes offer a centuries-old tradition of resource stewardship, practice state-of-the-art technological innovation, and are strategically located to respond to the critical management needs in their local watersheds.

For the tribes, the primary factor in the success of TFW has always been the cooperative decision-making process. This consensus-based approach has empowered the tribes and acknowledged their management authority regarding forest practices management. The tribes have demonstrated their ability to establish and maintain a cooperative process for the management of forest resources while incorporating tribal concerns. As they have throughout the TFW process, participating tribes are utilizing the Northwest Indian Fisheries Commission for necessary technical expertise and to coordinate their work effectively and collaboratively.

Tribal involvement with the implementation of the FFR has evolved with the availability of federal funds to support those efforts. A tribal base program for evaluation of forest management impacts upon treaty-protected resources is furthering the development of tribal capacity in the areas of silviculture, geology, and hydrology to complement their fisheries expertise. Additionally, tribal programs require coordination, information management and access to technical expertise to support tribal efforts as co-managers.

The tribes continue to develop and implement a comprehensive work plan evaluating the forest management guidelines set forth in the FFR for adequacy in meeting tribal salmon recovery goals. They have developed a comprehensive communication network and continue to implement a coordinated tribal response to improve both the content and application of the FFR in watersheds throughout the State of Washington.

Following are several examples of tribal activities related to TFW/FFR implementation.

Tribe Works To Protect Threatened Murrelet

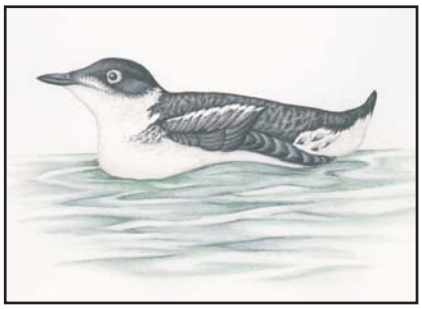
Tribal biologists rise early, searching for a threatened seabird.

With ears busy filtering out the hundreds of ambient forest sounds and eyes straining for dark birds entering a dark forest, biologists from the Stillaguamish Tribe painstakingly document every encounter with the marbled murrelet, a unique bird that relies on mature forests to nest, and marine waters to gather food.

As part of the TFW/FFR process, the tribal co-managers are working to learn more about where the murrelet lives – and how to better to protect the bird's forest home.

These surveys are not only crucial to understanding the murrelet, but could have a significant impact on forest practices and salmon recovery in Washington. The state's marbled murrelet populations are listed as "threatened" under the federal Endangered Species Act.

"Once we can prove that these birds occupy a given forest, that forest can be protected," said Jennifer Sevigny, a biologist with the Stillaguamish Tribe.


Marbled murrelet.

At most other times of year, the murrelet remains near the sea and its bounty of forage fish. During the breeding season, though, the murrelet will fly from sea to forest, carrying surf smelt, herring and sardines up to 70 miles to feed its single chick.

The tribe monitored nine sites within the Stillaguamish watershed in 2004 and two sites in 2005. They found two sites to be occupied by nesting marbled murrelets and detected signs of murrelet presence in six other sites.

"The murrelet shows us how interconnected our natural resources are, and how important protecting habitat is to wildlife. "Some of our best chinook spawning habitat is in the vicinity of the forests we are surveying for murrelets."

Stream Buffer Analysis Tool Offers Fish Eye View

Using an innovative technique that looks at forest from the fish's point of view, scientists from the Northwest Indian Fisheries Commission (NWIFC) are looking at the effectiveness of streamside buffers to protect salmon.

Looking at trees through a fish-eye lens helps scientists determine the effectiveness of streamside forest buffers.

"We're looking at the canopy from the fish's point of view, using a fish-eye lens to get the entire canopy in one snapshot," said Ash Roorbach, a riparian ecologist with the NWIFC. The fish-eye lens allows the researchers to take a picture of the forest canopy at a 180-degree angle with a camera held just inches above the stream. "With this technique, we see everything above the stream," he said.

In recent years, stakeholders in the TFW/FFR process have developed stream buffer rules that allow for timber harvest while protecting salmon habitat. Now, the stakeholders are going back and conducting a scientific review of those rules. "We didn't want to just write a number in a rule book and step away," said Bob Kelly, a Nooksack tribal member who serves on the state Forest Practices Board. "It's vital that we do this kind of research to determine if the buffers are appropriate."

Researchers use a metal tripod to hold the camera just above the water level in 30 western Washington streams. The camera shoots straight up, and through the fish-eye lens, provides a complete picture of the forest canopy within the buffer. "We take at least 10 pictures per stream, so we get a good idea of the shade conditions throughout the total buffer, not just at one point," said Roorbach.

The pictures are then analyzed to determine how much sunlight peeks through the forest. "The software we use to interpret the photos lets us determine the total amount of sky that is blocked, and then how much sunlight hits the creek at any given time," said Roorbach. Too much sun coming through the canopy can raise water temperatures to levels lethal to salmon.

The study is a project of the Cooperative Monitoring, Evaluation and Research (CMER) group, the science wing of the FFR process. Each FFR stakeholder – tribes, the timber industry, local state and federal governments and conservation groups – has a representative on the CMER group, which in turn reports to a central policy committee. "It's important to base policy decisions on impartial, scientific information," said Kelly. "By getting out into the woods and gathering data on the how the rules are working on the ground, we can ensure a sustainable timber industry and growing salmon populations."

Hoh Tribe Road-Testing Fish Habitat Model

The Hoh Tribe is comparing the accuracy of a computer model that can predict the presence of suitable fish habitat in the forests of western Washington with knowledge that can only be obtained the old fashioned way—by foot.

Bob Howell, TFW/FFR technician for the Hoh Tribe, compares a computer model's prediction of fish habitat to fish habitat maps created by tribal technicians who gathered their information on foot.

Bob Howell, TFW/FFR technician for the Hoh Tribe, is field testing the computer model against information the tribe has already collected throughout the Hoh River watershed on the Olympic Peninsula. Howell has walked hundreds of miles of stream in the Hoh River watershed, documenting where fish are found and recording important fish habitat. The information is shared with the Washington Department of Natural Resources to develop maps used to determine the amount of streamside buffers needed to protect fish in timber harvest areas. Streams containing fish and good fish habitat are protected by larger buffers than non-fish bearing streams. The maps are also used to determine other possible impacts to fish and wildlife habitat from proposed forest practice applications.

The computer model created out by TFW/FFR stakeholders, is designed to use existing Geographic Information System data that uses gradient, elevation, basin size, and rainfall data to predict whether a stream segment on a map could be suitable fish habitat. The goal is to reduce the amount of human checking required to verify stream information, thus reducing time and expense. While a computer model cannot be 100 percent accurate, the field tests will help fine tune its accuracy.

In some cases, the model predicted fish habitat in steep areas that have been heavily affected by debris flows created when old logging roads collapse, Howell said. "These areas might have been fish habitat at some point in the past, but they've been eroded down to bedrock from debris flows induced by past forest practices. It's good to indicate this is suitable habitat, but it's going to be awhile before it will support fish again."

Wildlife Management

Introduction

Wildlife resources have always been central to the cultures of the treaty Indian tribes in western Washington. Elk, deer, waterfowl and other wildlife have long provided a source of food and clothing for Indian people.

As with salmon and shellfish, the tribes reserved the right to harvest wildlife in treaties with the U.S. government:

"The right of taking fish at all usual and accustomed grounds and stations is further secured to said Indians in common with all citizens of the Territory, and of erecting temporary houses for the purpose of curing, together with the privilege of hunting and gathering roots and berries on open an unclaimed lands..."

- Treaty of Point Elliott, 1855

Little has changed over the centuries. The ancient link between the tribes and wildlife remains strong. Wildlife still provides important nutrition to Indian families on reservations where unemployment can run as high as 80 percent. As traditional foods, deer, elk and other wildlife remain important elements of feasts for funerals, naming ceremonies and potlatches. Hides, hooves, antlers, feathers and other wildlife parts are still used for traditional ceremonial items and regalia.

Unfortunately, the quality and quantity of the habitat upon which the wildlife resources in western Washington depend for their survival are declining rapidly. Where virgin forests once stood there is now urban sprawl. Deer and elk herds have been squeezed into smaller and smaller areas of degraded and fragmented habitat.

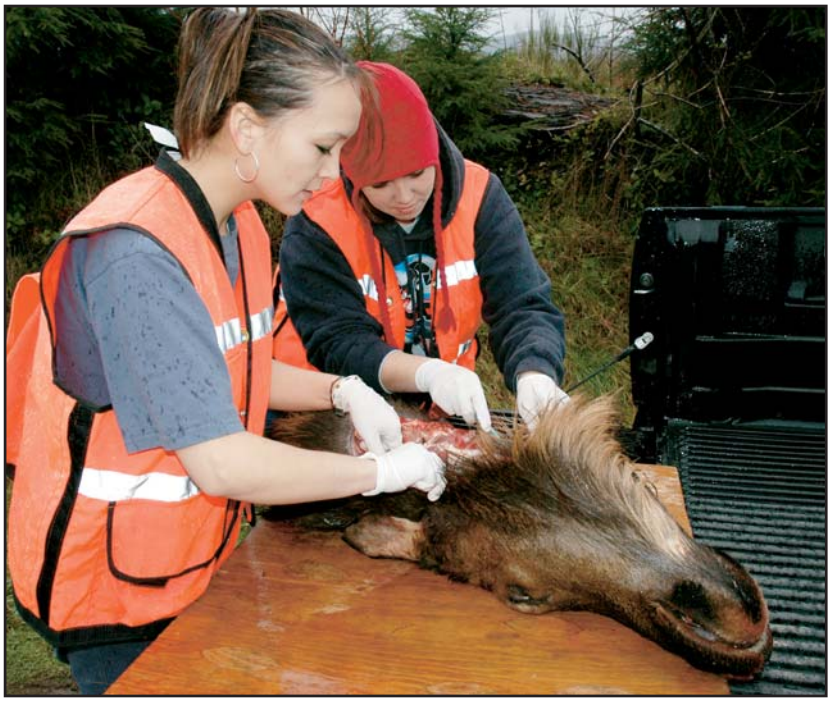
Concurrently, the ability of tribes to exercise their treaty-reserved right to hunt on open and unclaimed lands has also been dramatically impacted. Tribal members have been forced to hunt farther and farther from home to harvest their treaty-reserved share of wildlife resources.

A cow elk from the Mount St. Helens herd, equipped with a radio collar for tracking, surveys her new home in the North Cascades.

Overlaid on this background has been a series of legal skirmishes as well as state and federal court rulings, most of them favorable to the tribes, addressing tribal treaty hunting rights.

The treaty Indian tribes in western Washington, as responsible co-managers of the wildlife resource, work cooperatively with the State of Washington, citizen groups and others to manage the wildlife resources. However, the tribes face continual challenges to their treaty hunting rights.

State and federal courts have consistently upheld the right of treaty tribes to hunt on open and unclaimed land free of state regulation. The courts have generally ruled that lands such as national forests, which have not been set aside for uses incompatible with hunting, are open and unclaimed. Further, the courts have ruled that in order to apply a state regulation to a tribal member with a treaty hunting right, the state must prove that the regulation is both reasonable and necessary for conservation purposes.



Quileute tribal wildlife technicians gather samples from an elk's brainstem to check for signs of chronic wasting disease.

In 1999 the U.S. Supreme Court upheld the tribal treaty right to hunt on state lands free of state regulation in *Minnesota v. Mille Lacs Band of Chippewa Indians*. The ruling stemmed from hunting, fishing and gathering rights reserved by the tribe in an 1837 treaty with the U.S. government.

The Washington State Supreme Court made a similar ruling in 1999 in *State v. Buchanan*. The case involved a member of a treaty tribe charged with harvesting two elk during a closed season at the state-owned Oak Creek Wildlife Area. Two lower courts ruled Buchanan was simply exercising his treaty-reserved right to hunt on open and unclaimed land when he harvested the two elk.

The state Supreme Court ruled that treaty tribes may hunt within original tribal lands and traditional areas and also ruled that the state-owned Oak Creek Wildlife Area was open and unclaimed land within the meaning of the treaties. The court also threw out the state's argument that the treaty hunting right was eliminated when Washington became a state. As in the Mille Lacs case, the court said that only the U.S. government may abrogate a treaty right.

While tribes prefer to cooperate with the State of Washington in the implementation of their treaty hunting rights and responsibilities as co-managers of the wildlife resources, they realize that they may be forced to seek a clarification of their treaty hunting rights through the federal courts.

Tribal Wildlife Management

The treaty Indian tribes in western Washington have a long history of co-managing natural resources with the State of Washington. The tribes and state have had numerous successes in implementing cooperative natural resource management efforts to protect, restore and enhance the productivity of natural resources in Washington.

In a recent policy decision, the Washington Fish and Wildlife Commission recognized that "the preservation of healthy, robust and diverse fish and wildlife populations is largely dependent on the state and tribes working in a cooperative and collaborative manner."

It is important to understand that tribal hunters do not hunt for sport. Hunting is a spiritual and personal undertaking for each hunter. All tribes prohibit hunting for commercial purposes.

Western Washington treaty tribal hunters account for a very small portion of the total combined deer and elk harvest in the state. According to statistics for 2004-2005, tribal members harvested only 789 deer and elk – while non-Indians took almost 52,000, nearly fifty times as much.

Most tribal hunters do not hunt only for themselves. The culture of tribes in western Washington is based on extended family relationships. A tribal hunter usually shares his game with several families. In some cases, tribes may designate a hunter to harvest one or more animals for elders or families who cannot hunt for themselves.

As a sovereign government, each treaty tribe develops its own hunting regulations and ordinances governing tribal members. Each tribe also maintains an enforcement program to ensure compliance with tribal regulations. As responsible managers, tribes know the value of enforcement as a management tool. Tribes have limited hunting opportunity for tribal members when, because of budgetary constraints, they have lacked resources to adequately enforce their regulations. The ratio of tribal enforcement officers to treaty hunters is higher than the ratio of state enforcement officers to non-Indian hunters.

Like the State of Washington, tribes set seasons based on sound biological information about the ability of the resource to support harvest.

Before opening any area to hunting, many tribes forward their regulations to WDFW for review and comment. Tribes also share their harvest data with the department.

Tribal hunters are licensed by their tribes and must obtain tags for each big game animal they wish to hunt. If a hunter is successful, he must tag the animal and submit a harvest report to the tribe. If a hunter is unsuccessful, he must report that result anyway, which yields valuable data for state and tribal wildlife managers. Tribal members are required to report all attempts at harvest. All tribal hunters carry photo identification cards with their name, date of birth, tribal affiliation and other information.

If a tribal member is found in violation of tribal regulations, he is cited into tribal court. Penalties can include fines and loss of hunting privileges. In most cases, tribal hunting regulations address the same harvest and safety concerns as state rules, such as prohibiting the carrying of loaded firearms in vehicles.

A number of tribes conduct hunter education courses, aimed especially at young tribal members, to ensure their hunters are safe when exercising their treaty right. Students are taught how to handle firearms, ethical considerations and the reasons behind tribal hunting regulations. Cultural aspects of hunting, as well as treaty hunting rights, also are covered in the classes.

Collectively, the tribes have created the Inter-tribal Wildlife Committee of the Northwest Indian Fisheries Commission (NWIFC) to provide a forum for addressing inter-tribal issues. The committee also provides a unified voice in discussions with state and federal wildlife managers.

Following is an example of the types of management projects conducted by tribes during FY 05:

Tribes, State Work To Enhance Nooksack Elk Herd

A cooperative effort between the Point Elliott Treaty tribes and the Washington Department of Fish and Wildlife (WDFW) to bolster a weak population of elk in the North Cascades resulted in the successful transfer of dozens more animals from the Mount St. Helens area this year. The elk were moved to help augment the flagging Nooksack elk herd, also known as the North Cascades elk herd.

Shawn Yanity, chair of the Stillaguamish Tribe, cradles the head of a cow elk while it is processed for transfer.

"We are pleased with the results of this joint effort," said Todd Wilbur, Swinomish Tribe, who chairs the Inter-tribal Wildlife Committee of the NWIFC. "The tribes are committed to enhancing and protecting elk populations throughout western Washington. This project will dramatically improve the health of the North Cascades elk herd." The effort also aided the larger Mount St. Helens elk herd that had outgrown its food supply.

The transfers are designed to jump start efforts to rebuild the North Cascades herd, where the number of elk has declined from 1,700 animals to 300 since 1984. Those efforts include a decade-old ban on hunting and projects to improve elk forage.

"We are monitoring all of the re-located elk and they are doing well in their new habitat," said Wilbur. "We are especially grateful for the help of community volunteers, such as the Mount St. Helens Preservation Society, for their assistance in the trapping effort."

The Point Elliott tribes have taken the lead in monitoring the elk moved to the North Cascades so far. Adult cow elk were fitted with radio-transmitting collars, which will allow biologists to track their movements and habitat uses. The Point Elliott treaty tribes, working in cooperation with the state co-managers and Rocky Mountain Elk Foundation volunteers, will use the collars to electronically monitor the movements of the transplanted elk. Point Elliott Treaty tribes include Lummi, Muckleshoot, Nooksack, Sauk-Suiattle, Stillaguamish, Suquamish, Swinomish, Tulalip and Upper Skagit.

The tribes will continue monitoring the collared animals at least once a week for the next several years.

Biologists believe a number of factors contributed to the decline in the North Cascades elk herd's population, including habitat changes and over-hunting. WDFW and the tribes have forbidden hunting in the herd's core area since 1993, and hunting seasons for the area will not be established until elk populations have reached a recovery goal.

"Elk and other wildlife have always been essential for the tribes," said Scott Schuyler, natural resources policy coordinator for the Upper Skagit Tribe. "Allowing elk populations to vanish is simply not an option for us."

"It's a tradition to set the table with venison, and it will continue to be part of our culture," said Harlan James, the Lummi Nation policy representative.

Tribal Water Resources Program

Introduction

Fifteen years ago the treaty Indian tribes in western Washington partnered with the Environmental Protection Agency (EPA) to create and implement a nationwide model of cooperation and creativity in addressing water quality issues under the Clean Water Act. This year, building on the success of that initiative, these same tribes are embarking on a new partnership with the U.S. Geological Survey to expand the Coordinated Tribal Water Quality Program into a Coordinated Tribal Water Resources Program.

While much has been accomplished in the area of water quality, the Northwest Indian Fisheries Commisson (NWIFC) with its 20 member tribes has identified the need for a comprehensive assessment of water resources in western Washington as the basis for the informed management of those resources. In western Washington, climatic changes and urban development are having profound effects on water resources and aquatic ecosystems. This situation is expected to worsen with an expected doubling of the Puget Sound region's population in the next 20 years.

Judicious management of water resources and protection of tribal rights requires information about the quantity and quality of water available in western Washington.

The assessment would produce scientific information on water resources that could be used to support a variety of tribal water resource management, administrative, and legal activities including:

- Establishing instream flows to sustain viable and harvestable populations of fish;
- Identifying limiting factors for salmon recovery;
- Evaluating amounts of ground and surface water supplies;
- Protecting existing ground and surface water supplies;
- Reviewing and evaluating administrative decisions (for example, proposed water permits and instream flows) and project proposals on- and off-reservation; and
- Participating in federal, state, and local planning processes for water quantity and water quality management (for example, total maximum daily load planning, State of Washington watershed planning under Engrossed Substitute House Bill 2514, and conjunctive use projects).

Proposed Partnership With USGS

The treaty Indian tribes in western Washington requested that the U.S. Geological Survey (USGS) develop a cooperative scientific framework for a comprehensive assessment of water resources in western Washington. The assessment will provide a scientific basis for tribal water resources management by evaluating unimpaired water availability, out-of-stream uses of water by tribal and non-tribal parties, and water requirements for ecosystems in western Washington.

As a federal agency located in the Interior Department, USGS has a trust responsibility to tribal governments. They are also the preeminent authority among governments for instream flows. They can provide valuable expertise, supervision, and guidance to the tribal effort.

Since the 19th century, water resources in western Washington have been the subject of extensive scientific investigation by tribal, federal, state, and local government agencies, public utilities, and private interests. Despite this recent history of investigations, data collected by through these efforts are not readily available to inform current management activities. Many of the investigations were motivated by a specific local concern such as locating a dam to generate hydroelectricity, determining instream flows for a specific reach of a river, or assessing water use for a municipality.

Although some investigations have integrated information about the availability and use of water sources for specific basins or sub-basins, this information has not been compiled on a comprehensive basis for western Washington. A tribal water resources assessment will collect available information on the region's water sources, quality, and uses. Existing or new information systems will be used to make the information readily available to tribal water resources managers.

In addition to providing a comprehensive perspective on water resources in western Washington with existing information, the assessment will identify information gaps and approaches for filling them. The information gaps reflect the large and diverse geography of the region, the various time scales of information ranging from instantaneous flows to decadal climate variability, and the limits on the scientific understanding of river ecosystems and the regional hydrosystems that support them. A primary objective of the assessment will be to identify where additional monitoring, surveys, or focused studies are needed to improve the initial characterization of water resources in western Washington.

The tribes have shown, through their work with EPA in the Coordinated Tribal Water Quality Program, how a strong working relationship can also be developed with USGS. The tribal/EPA effort has improved the structure of relationships, thereby enhancing the success of ecosystem management approaches. Additionally, the tribal/EPA model program has produced transferable tools that can be shared with tribes throughout the nation. These tools include:

- Routine coordination and networking among tribes, state agencies and EPA;
- A coordinated tribal water quality database design and structure;
- A tribal water quality standards template;
- A Coordinated Tribal Water Quality Program design manual; and
- A cooperative state/tribal 303(d) strategy.

Much of this cooperative approach and work can be utilized in the water assessment effort. A unified tribal commitment and call for data will be the foundation of collecting and compiling the most important assessment of this region's water resources ever developed. By embarking on this seven to 10-year effort, tribes and the USGS would initiate a shift in the region's water discussions and policy development from one of speculation and politics to one of substance and purpose. Successful completion could support meaningful dialogue and partnership development throughout the region regarding instream flow setting, water conservation and growth.

Gene Gaddie, Quileute tribal water quality technician, lowers a sechi disc to determine water clarity in the Quillayute River.

The recent release of the State of Our Watersheds Report is just one example of the cooperative efforts and capabilities of the tribes in compiling, analyzing and sharing important natural resource information.

Watershed Report Offers Map For Salmon Recovery

The State Of Our Watersheds Report, produced by the treaty Indian tribes in western Washington in cooperation with the State of Washington, is the most comprehensive report to date on the status of salmon habitat in the region. The report compiles decades of data collected by tribes, and state and federal agencies, painting a picture of watersheds across western Washington.

"Tribes have always lived on watersheds, along the rivers," said Billy Frank Jr., chairman of the Northwest Indian Fisheries Commission. "We have always had a watershed perspective, and this report tells the story of salmon habitat from our perspective."

The State of Our Watersheds report is a product of the Salmon and Steelhead Habitat Inventory and Assessment Program (SSHIAP), a cooperative effort of the treaty Indian tribes in western Washington and the Washington Department of Fish and Wildlife. SSHIAP collects information on salmon habitat conditions throughout the state and manages it in a single geographic information system database.

The report by the salmon co-managers brings together data from across the spectrum – including water quality, available habitat, and salmon run sizes – that have not been displayed together before in one document.

"This report begins to connect the dots between the health of salmon habitat and the health of the salmon," said Frank, adding that the work would not have been possible without the assistance of U.S. Rep. Norm Dicks, (D-Wash.), who was instrumental in securing funding for the project.

"This is a good example of how and where salmon recovery efforts are making a difference and where we need to target more work," said Bob Kelly, natural resources director for the Nooksack Tribe. "The report starts out as a snapshot, but in a few years we'll be able to show a movie."

Upper Quinault River watershed.

The report was released in early 2005. While it took years to compile and write, it represents decades worth of data collected by tribal staff across western Washington. "The tribes' homes are the watersheds," said Frank. "Tribal staff have been out in the watershed for years collecting the data for the report. Since tribes live in the watersheds, we know the watersheds best."

In addition to tribally collected data, the report also collected information from several state and federal agencies. "Bringing together all of that data from different places gives us a much better idea of how salmon are faring in changing habitat conditions," said Mike Grayum, executive director of the Northwest Indian Fisheries Commission, which provides natural resource management support services to 20 treaty Indian tribes in western Washington.

"This report will give us a road map to recovering salmon across the region," said Frank. "With this information, we can make better decisions about were to focus our efforts to bring salmon back to harvestable levels.

New Technology Will Aid Tribal Water Program

Given that two-thirds of the world is water, all life depends on that life-giving fluid. Given that the Tulalip Tribes rely on fish and shellfish for cultural, spiritual and economic purposes, protecting water resources on the reservation is vital to the tribes' way of life.

For most of the last decade, the Tulalip water quality program has worked to preserve and protect the fresh and marine waters of the reservation. Now, new technology is assisting the program in measuring the health of these aquatic systems.

Harvey Eastman, director of the program, is now utilizing a new colormetric spectrophotometer – a machine that is invaluable in helping Eastman and the Tulalip water quality program determine where problem areas exist on the reservation. From there, the Tulalip Natural Resources Department works to address those problems, aiding both the environment and people who rely on that environment.

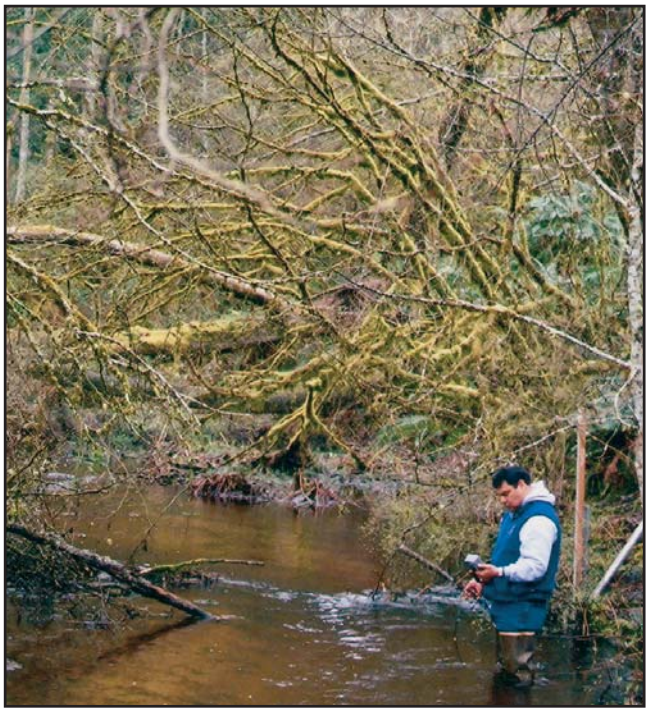
The machine helps measure nutrient content in bodies of water. By detecting nitrate, nitrite, ortho-phosphate and other chemicals, the tribal water quality program can find early indicators of septic tank failure, improper applications of fertilizers, breakdown of animal waste and other events that cause problems for water, people and fish.

Eastman has been working with this upgraded equipment ever since it was acquired in November 2001 through a grant from the Tulalip Tribes.

"This is a valuable tool in assessing our water quality needs on the reservation," said Eastman.

Why the emphasis on finding and preventing septic tank failure? Impurities cause potential for disease-causing pathogens to grow in the water. This could be a problem for shellfish, as well as for any people who come into contact with the affected streams.

"Secondary contact — through swimming, for example — is a big concern for us," said Eastman. "We're very concerned about the health of the people."



Harvey Eastman, director of the Tulalip Tribes' water quality program, gathers water from a stream on the Tulalip Reservation near Marysville.

The Tulalip water quality lab was certified in 1995 by the state of Washington's Department of Ecology. Since then, they've been monitoring surface water on and off the reservation.

The water quality program for Tulalip looks primarily at on-reservation surface water. This includes three streams — Battle Creek, Tulalip Creek, and Quil Ceda Creek – as well as Tulalip Bay and other nearshore marine waters.

Eastman, a Quileute tribal member, started working with the on-reservation water quality program in May 2000. Richard Miller, another staff member, does the off-reservation water quality sampling.

"We work to identify water quality problems so that our natural resources department can solve them," said Eastman. "Clean water benefits everyone in the community."

NWIFC FY 05 Overview

Introduction

"We, the Indians of the Pacific Northwest, recognize that our fisheries are a basic and important natural resource and of vital concern to the Indians of this state, and that the conservation of this natural resource is dependent upon effective and progressive management. We further believe that by unity of action, we can best accomplish these things, not only for the benefit of our own people, but for all of the people of the Pacific Northwest."

– Preamble to the NWIFC Constitution

The Northwest Indian Fisheries Commission was created in 1974 by the treaty Indian tribes in western Washington as a result of the *U.S. vs. Washington* litigation that affirmed fishing rights reserved by the tribes in treaties signed with the federal government in the 1850s.

The commission's role is to assist the tribes in conducting biologically sound fisheries and to provide member tribes with a single, unified voice on fisheries management and conservation issues. Member tribes are: Hoh, Nisqually, Squaxin Island, Puyallup, Jamestown S'Klallam, Port Gamble S'Klallam, Lower Elwha Klallam, Skokomish, Swinomish, Sauk-Suiattle, Upper Skagit, Tulalip, Makah, Stillaguamish, Muckleshoot, Suquamish, Nooksack, Lummi, Quinault and Quileute.

The tribes select commissioners who develop policy and provide direction to NWIFC staff. The commissioners elect a chairman, vice-chairman and treasurer. The commission's executive director supervises the staff that implements the policies and fisheries management activities approved by the commissioners. The NWIFC employs about 65 full-time employees in its Administration, Fishery Services, Habitat Services, and Information and Education Services divisions.

FY 05 In Review

Ongoing salmon recovery efforts, implementation of a federal government mandate requiring the mass marking of salmon produced in federally funded tribal hatcheries and development of an approach to address tribal water rights were among many important issues addressed by the treaty tribes and their Northwest Indian Fisheries Commission in FY 05. In addition, a new executive director was selected to guide the NWIFC.

Wild Salmon Recovery: A Shared Strategy

The Shared Strategy is a bottom-up collaborative approach to wild salmon recovery that links ongoing wild salmon recovery initiatives at the tribal, state, federal and local levels to create a plan that is viable and cost-effective.

After nearly six years of collaborative efforts, a recovery plan for listed Puget Sound chinook that meets ESA requirements has been delivered to the National Marine Fisheries Service (NMFS), the federal agency charged with implementing the ESA. The endorsement and participation of NMFS in the Shared Strategy process has been critical to its success.

Work is under way now to develop a financing approach to implement the plan.

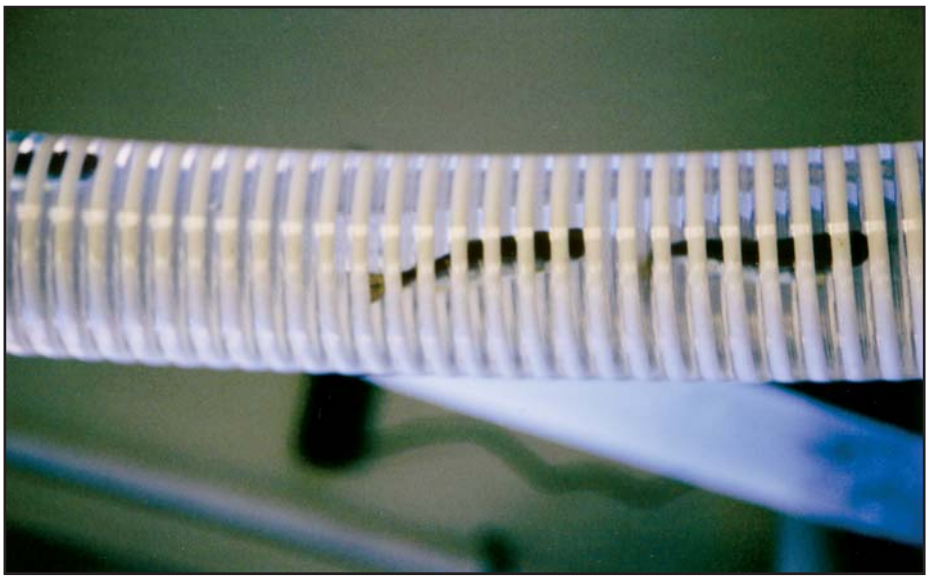
Hatchery Reform Project

The Puget Sound and Coastal Washington Hatchery Reform Project, a systematic, science-driven examination of how hatcheries can help recover and conserve naturally spawning salmon populations and support sustainable fisheries.

In FY 05, the tribal, state and federal co-managers continued implementing more than 1,000 recommendations—from changes in hatchery practices to modification of facilities—developed by an independent Hatchery Reform science panel as part of the effort.

Mass Marking

Tribal and state co-managers also worked during FY 05 to implementation federal legislation requiring the mass marking of all fish produced from federally-funded hatcheries. Mass marking, in which hatchery-raised fish are fin-clipped for identification, enables fishermen to selectively harvest only hatchery salmon, while releasing unmarked wild salmon.



Young salmon are pumped through a tube into a new automatic tagging and fin-clipping trailer that is aiding salmon management.

A new automatic clipping and tagging trailer was acquired with federal funding sought by U.S. Rep. Norm Dicks (D-WA) to implement the mass marking mandate. The trailer increases the speed of fin clipping, and because it needs fewer personnel, makes the process of marking fish more affordable to tribes.

Water Resources

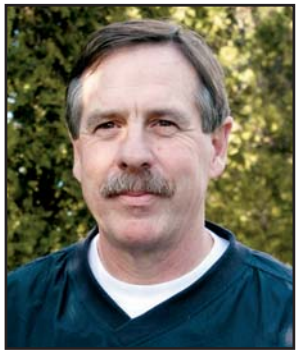
Water issues continued to be a focus of tribal and NWIFC activities during FY 05.

In western Washington, disputes over water for fish and water for growth are exacerbated by rapid population growth, land use change and shifting climate patterns. Tribes are evaluating, planning for and working to maintain adequate water supplies for their fish and homelands.

For more than three decades, the western Washington Tribes have pursued a number of administrative, cooperative, voluntary and inter-governmental approaches to define and establish the instream flows necessary to protect and restore salmon resources.

In October 2005 tribes gathered for their fourth Water Summit to discuss the status of the water resource and further their action agenda to secure and stabilize that treaty reserved resource. This annual gathering has been central to communicating a common awareness of issues and coordinating an implementation strategy. This year discussion centered on the magnitude of potential impacts from global warming and the critical need to engage state-of-the-art water conservation efforts to address these impacts.

New NWIFC Executive Director



Mike Grayum

After more than 20 years, a change of leadership occurred at the NWIFC in FY 05. Jim Anderson retired in February 2005. He was replaced by long-time NWIFC employee Mike Grayum, who previously served as the head of the Fishery Services Division. Grayum has been with the NWIFC for 29 years and was among the first employees hired by the organization following the *U.S. vs. Washington* ruling that upheld the tribes' treaty-reserved salmon rights and established the tribes as co-managers of the resource with the State of Washington.

FY 05 Activities Summary

Following is a synopsis of NWIFC activities during FY 05:

Fishery Services

Fishery Management And Planning Division

The primary objective of the Fishery Management and Planning Division is to provide technical assistance and coordination to member tribes in their annual and long-range fishery management planning activities. Activities included:

- Long range planning, wild salmon recovery efforts and Endangered Species Act implementation;
- Development of pre-season fishing agreements;
- Development of pre-season and in-season run size forecasts;
- In-season fisheries monitoring; and
- Post-season fishery analysis and reporting.

Quantitative Services Division

The Quantitative Services Division's objective is to assist tribal fishery management programs by providing relevant data, quantitative tools and analyses, and technical consulting services to tribal and NWIFC projects. Activities included:

- Administering and coordinating the Treaty Indian Catch Monitoring Program;
- Providing statistical consulting services;
- Conducting data analysis of fisheries studies and developing study designs; and
- Updating and evaluating fishery management statistical models and databases.

Enhancement Services Division

The Enhancement Services Division provides tribal support services in enhancement planning, hatchery coordination, coded wire tagging, and fish health. Activities included:

- Coded wire tagging of 4 million fish at tribal hatcheries to provide information critical to fisheries management;
- Providing genetic, ecological, and statistical consulting for tribal hatchery programs; and
- Providing fish health services to tribal hatcheries.

U.S./Canada Pacific Salmon Treaty Implementation

The Pacific Salmon Treaty of 1985 provides for tribal representation at all levels of the Pacific Salmon Commission, which implements the treaty. NWIFC staff are involved in many aspects of the treaty's implementation. Activities included:

- Facilitating inter-tribal and inter-agency meetings, developing issue papers and negotiation options;
- Serving on the Fraser sockeye and pink, chum, coho, chinook, and data sharing technical committees, as well as other work groups and panels; and
- Coordinating tribal research and data gathering activities associated with implementation of the Pacific Salmon Committee.

Habitat Services

The Habitat Services Division provides coordination, representation and technical assistance to member tribes on fish habitat and other environmental issues. The division monitors these issues and acts as an information clearinghouse. Activities included:

- Coordinating policy and technical level discussion between tribes and federal, state and local governments, and other interested parties;
- Coordinating, representing and monitoring tribal interests in the Timber/Fish/Wildlife process, Coordinated Tribal Water Quality and Ambient Monitoring programs; and
- Implementing the Salmon and Steelhead Habitat Inventory and Assessment Project.

Information And Education Services

The Information and Education Services Division provides comprehensive public relations and educational service to member tribes.
Activities included:

- Producing news releases, newsletters, brochures, reports, curricula, videos, photographs, exhibits and maintaining a Web site to educate the public about tribal natural resource management activities and objectives;
- Producing newsletters, background papers and other materials;
- Responding to hundreds of public requests for information about the tribes and their tribal natural resource management activities; and
- Monitoring legislation and coordinating tribal input.

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